CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER 93-048

SITE CLEANUP REQUIREMENTS FOR:

WESTERN MICROWAVE, INC.
AND
SOBRATO DEVELOPMENT COMPANIES

for the property located at

1271 REAMWOOD AVENUE
SUNNYVALE
SANTA CLARA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the Board) finds that:

1. Site Location and Description The site is located in the northern portion of the City of Sunnyvale, Santa Clara County, California. It is situated on the west side of Reamwood Avenue, approximately 1-1/4 miles north of Interstate Highway 101 and approximately 1/4 mile south of Highway 237.

2. The site consists of the southern half of a 2.4 acre parcel developed with one building (1271 & 1273 Reamwood Avenue). The site and the surrounding area are relatively flat, lying at an elevation of between 5 and 8 feet above mean sea level.

3. Prior to the 1960s, the land use in the vicinity was predominantly agricultural. Most development dates from 1960s or later and consists of industrial facilities with associated offices. There are no residential areas between the site and San Francisco Bay.

4. Site History and Regulatory Status Sobrato Development Company, which is the owner of the property, developed the 1271/1273 Reamwood Avenue facility in 1979. Western Microwave, Inc. (hereinafter called WMI) leased the building from April 1979 to May 1990 before it relocated to 495 Mercury Drive, Sunnyvale. WMI subleased the northern portion of the premises to Laselco Pacific and occupied the southern portion of the building for manufacturing microwave components. WMI used different chlorinated and aromatic hydrocarbons and inorganic chemicals in its manufacturing process, as revealed in WMI's chemical use history. Since May 1990, the property was

vacant until Micro Lithography, Inc. (MLI) leased the northern part of the building in April, 1991. The southern portion of the building was vacant until De Anza Manufacturing Services signed a five year lease in September, 1992.

5. WMI discovered a release of volatile organic compounds (VOC) contamination at its plating room in 1985. The plating room was closed after soil samples underneath the room revealed high VOC concentrations. In 1986, groundwater samples detected high VOC concentrations in the shallow aquifer, including tetrachloroethene (PCE) at 7,000 parts per billion (ppb). PCE is a chemical compound which is believed to be carcinogenic, as are some of its breakdown products. PCE levels are consistently higher at this site than at neighboring sites, confirming that PCE was released at this site.

6. WMI is named as a discharger based on its chemical usage data and soil and groundwater investigations during its occupancy of the site from 1979 to 1990. It has been determined that WMI has released chemicals to soil and groundwater at the 1271 Reamwood Avenue facility. Sobrato is named as discharger because it is current owner of the site and will be responsible for compliance only in the event that WMI fail to comply with the requirements of this Order. If additional information is submitted indicating that any other parties caused or permitted any waste to be discharged on the site where it entered or could have entered waters of the State, the Board will consider adding that party's name to this Order.

7. Hydrogeology Surface water bodies in the vicinity of the site consist of San Francisco Bay, tidal creeks and estuarine wetlands adjacent to the bay that flow from ephemeral freshwater streams from the Santa Cruz mountains to San Francisco Bay. Surface runoff in the site vicinity is controlled by urban storm water runoff systems that eventually lead to the City of Sunnyvale storm drain system.

8. The near surface deposits in the area are fine grained estuarine deposits consisting of unconsolidated, plastic clays and silty clays, which are rich in organic material that contains lenses and stringers of well sorted silt and sand, as well as beds of peat.

9. Groundwater generally exists in the permeable sand and gravel and alluvial fans deposited by east-flowing streams descending from the Santa Cruz Mountains. The regional groundwater gradient, as determined by other studies in the immediate area of the site, is northerly. The first shallow water-bearing zone ("A" zone) at the site was encountered at a depth of approximately 8-1/2 feet below ground surface (bgs). The intermediate water-bearing zone ("B" aquifer) is believed to exist from about 42 to about 75 feet bgs. These aquifers are separated from the deeper water-bearing zone ("C" aquifer) by a component

clay aquitard.

10. Soil Investigation and Remediation In 1986, WMI performed soil investigation to determine the extent of contamination. Two-phases of soil investigation were implemented. Phase I involved analysis of soils and soil gas collected from beneath the plating room floor on the WMI site. Soil samples were collected at depths of two and seven feet below the concrete floor. The results indicated soil under the plating room was impacted by VOCs from the former activities of WMI. As a result, the plating room was closed in 1985.

11. Phase II was performed by Sobrato in 1990. Soil samples were collected and analyzed from 32 locations on the WMI site. Soil samples from the former plating room and chemical storage area detected with high VOCs concentration. These analytical results identified VOCs at a concentration of 27 ppm and 50 ppm at depths of two and seven feet bgs, respectively.

12. Based on the soil data, Sobrato excavated soil from beneath the plating room area to a depth of approximately seven feet bgs in September 1990. The action removed soil contaminated with total VOCs in excess of 1 ppm. However, the 1990-1991 soil investigation and remediation activities were incomplete. Additional soil investigation is needed in all potential source areas, such as west of the building at the outdoor chemical yard and areas that have not investigated yet. Based on the soil investigation findings, WMI may need to perform soil remediation.

13. Groundwater Investigation and Remediation WMI also conducted shallow ("A" zone) groundwater investigation to characterize the site and define the contaminants and their impact to the "A" zone aquifer. Four "A" zone groundwater wells were installed near the southwest corner of the site between 1985 to 1986 (P-1, P-2, P-3, & P-4). An additional monitoring well (MW-1) was installed by Sobrato in 1990 at the southwestern side of the facility downgradient of the Lockheed facility. Monitoring well P-4, located inside the plating room of the facility, was destroyed in 1991 during soil remediation activity.

14. WMI conducted quarterly groundwater monitoring between 1987 and 1989 at the request of the Regional Board. WMI did not conduct a routine groundwater monitoring at the site in 1990 and 1991. WMI re-initiated groundwater monitoring in 1992, again at the request of Regional Board.

    Groundwater samples collected from wells P-1 through P-3 in October 1992 revealed PCE at concentration as high as 4,300 micrograms per liter (μg/l or ppb). Other constituents detected in groundwater beneath the facility included, trichloroethene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE), and Freon 113. All

but Freon 113 significantly exceed drinking water standards. Analytical results from the quarterly reports indicated that concentrations of chlorinated organic compounds in groundwater have risen significantly since 1987 as the table below shows:

Groundwater Concentrations (in ppb) in Monitoring Well P-2

Date	PCE	TCE	cis-1,2-DCE
01/87	ND	140	40
03/88	556	311	36
05/89	7200	<250	<250
03/92	4300	440	170
01/93	3600	440	160

Note: ND = not detected

15. So far, there is no groundwater remediation performed at the site. The existing four shallow groundwater monitoring wells are inadequate to demonstrate the vertical and lateral extent of the plume.

16. **Adjacent Sites** The Intersil site is located at 1276 Hammerwood Avenue, Sunnyvale, west of WMI (see Figure 1). VOC releases were first discovered in 1982 during the Underground Tank Leak Detection Program. Subsurface investigations at the Intersil site revealed the presence of chlorinated organic solvents in the soil and groundwater. Trans-1,2-dichloroethene (trans-1,2-DCE) was found at levels as high as 13 ppm in the soil and 5700 ppb in the groundwater. Trichloroethene (TCE) was found at levels as high as 5.3 ppm in the soil and 3600 ppb in the groundwater. The Board adopted Waste Discharge Requirements (Order No. 86-78, October 15, 1986) for Intersil. Intersil has fully determined the vertical and lateral extent of the contaminants. Intersil also performed Interim Remedial Measures at the site by installing three operating and one standby extraction wells and one air stripping treatment facility. Intersil and WMI sites are cross-gradient to each other, and their pollutant plumes may be commingled, especially at the boundary of the two properties.

17. WMI alleges that Lockheed Missiles and Space Company (Lockheed) located at 1235 Elko Avenue and Micro Lithography, Inc. (MLI) current occupant of the northern portion of the 1271/1273 Reamwood Avenue building are off-site sources. Board staff will address these potential sources of VOCs separately. Based on a Board request, Lockheed in 1987 submitted a chemical use history. Lockheed is also conducting investigations of soil and groundwater quality in the vicinity of its former facility at 1235 Elko Avenue. Board staff requested

chemical use practices by MLI in a March 18, 1993 letter.

18. WMI has been in litigation with Intersil and Sobrato (owner of the property) for more than three years. On December 16, 1992, WMI signed Settlement Agreements and Mutual Releases with both Intersil and Sobrato.

19. Technical Reports WMI has submitted the following reports to the Regional Board:

- Workplan addendum for Remedial Action Plan April 15, 1993.
- Workplan for preparation of Remedial Action Plan (January 19, 1993).
- Self-Directed Removal Action (December 10, 1991).
- Expanded Soil Gas Survey (January 14, 1991).
- Groundwater Sampling Study (July 16, 1990).
- Level I Environmental Site Assessment (March 28, 1990).
- Groundwater Monitoring Program Annual from 1987 to 1989.
- Environmental Briefing (November 2, 1987).
- Soil and Groundwater Investigation (September 26, 1986).
- Exploration Drilling and Soil Sampling at WMI's plating shop (July 26, 1985).

The April 15, 1993, workplan addendum was not acceptable, and the Executive Officer requested WMI to submit an adequate workplan as soon as possible.

20. Water Quality Control Plan The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on December 11, 1991. The Basin Plan contains water quality objectives for the South San Francisco Bay and contiguous surface and ground waters.

21. The Basin Plan defines existing and potential beneficial uses of the ground water underlying and adjacent to the dischargers' facilities. These include:

a. Municipal and Domestic water supply
b. Agricultural water supply.
c. Industrial process water supply
d. Industrial service water supply

Upper aquifer groundwater underlying and adjacent to the site is not currently used for any of the above purposes.

22. The discharger has caused or permitted waste to be discharged or deposited where it is or probably will be discharged to waters of the State and creates or threatens to create a condition of pollution or nuisance.

23. This action is an Order to enforce the laws and regulations administered by the Board. This action is categorically exempt from the provisions and CEQA pursuant to Section 15321 of the Resources Agency Guidelines.

24. The Board has notified the dischargers and all interested agencies and persons of its intent under California Water Code Section 13304 to prescribe Site Cleanup Requirements for the dischargers and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

25. The Board, at a public meeting, heard and considered all comments pertaining to this discharge.

IT IS HEREBY ORDERED, pursuant to Section 13304 of the California Water Code, that the discharger shall cleanup and abate the effects described in the above findings as follows:

A. PROHIBITIONS

1. The discharger of wastes or hazardous materials in a manner which will degrade water quality or adversely affect beneficial uses of the waters of the State is prohibited.

2. Further significant migration of pollutants through subsurface transport to waters of the State is prohibited.

3. Activities associated with the subsurface investigation and cleanup which will cause significant adverse migration of pollutants are prohibited.

B. SPECIFICATIONS

1. The storage, handling, treatment or disposal of polluted soil or groundwater shall not create a nuisance as defined in Section 13050(m) of the California Water Code.

2. The discharger shall conduct site investigations and monitoring activities as determined by the Executive Officer to define the current local hydrogeological conditions, and the lateral and vertical extent of the soil and groundwater pollution. Should monitoring results show evidence of pollution migration, additional plume characterization of pollutant extent may be required.

C. PROVISIONS

1. The discharger shall perform all investigations and remedial work in accordance with requirements of this Order.

2. The discharger shall submit to the Board acceptable monitoring program reports containing results of work performed according to the attached self-monitoring program.

3. The discharger shall comply with all Prohibitions and Specifications of this Order, in accordance with the following schedule and tasks:

a. TASK 1: Groundwater Conservation

COMPLETION DATE: **June 15, 1993**

Submit a technical report acceptable to the Executive Officer which documents compliance or intent to comply with Board Resolution No. 88-160, "Regional Board Position on the Disposal of Extracted Groundwater From Groundwater Cleanup Projects."

b. TASK 2: Implementations of Interim Remedial Measures for Soil and Groundwater Plan

COMPLETION DATE: **180 days after approval of workplan for interim remedial measures and preparation of remedial action plan**

Submit a technical report acceptable to the Executive Officer which documents implementation of interim remedial measures for soil and groundwater pollution.

c. TASK 3: Results of Investigation

COMPLETION DATE: **180 days after approval of workplan for interim remedial measures and preparation of remedial action plan**

Submit a technical report acceptable to the Executive Officer that describes the results of the investigation. The report shall include, but not limited to, the following information, if applicable:

- new soil borings and groundwater monitoring well installation logs;

- copies of new well installation permits;
- tabulated results of soil and groundwater pollutant analyses;
- appropriately scaled maps;
- soil boring and groundwater monitoring well locations;
- site-specific geologic cross sections;
- explanation of vertical and lateral extent of the soil and groundwater pollution;
- an evaluation of potential conduits for the vertical migration of pollutants;
- description of the site hydrogeologic conditions;
- evaluation of the extent to which soil pollution may be contributing to groundwater pollution; and,
- submittal of off-site Phase II workplan if deemed necessary.

The off-site Phase II workplan should propose off-site interim remedial actions, installation of an impermeable wall (or other measures satisfactory to Intersil) sufficient to prevent any off-site migration of contamination from the Reamwood Property to properties on the north or west of the Reamwood Property, as stated in the court settlement agreement, if appropriate, with a schedule for implementation. The workplan should also include the schedule for installation of an extraction system for groundwater at the Reamwood Property.

d. TASK 4: Evaluate and Propose Final Remediation Plan

COMPLETION DATE: One year after the start-up of interim remedial measures described in Task 2

Submit a technical report acceptable to the Executive Officer which contains a plan for the proposed remedial actions and implementation schedule. The report shall evaluate the effectiveness of the interim remedial actions which have been implemented. This report shall identify polluted soils and groundwater and evaluate the need and alternatives for the cleanup of polluted soils, control of a migrating groundwater pollution plume, or, conducting pilot or treatability studies for the proposed remedial actions. The proposed remedial alternatives shall reduce the volume, mobility, and toxicity of pollutants. Cleanup standards shall consider a risk-based approach for all pollutants that may remain in the soil or groundwater, in addition to the factors cited in Provision 6. The report shall include a schedule for the tasks and time schedule for implementation of the recommended remedial actions.

4. Pursuant to Section 13304 of the Water Code, the discharger is hereby notified that the Regional Board is entitled to, and may seek

reimbursement for, all reasonable costs actually incurred by the Regional Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this Order. Upon receipt of a billing statement for such costs, the discharger shall reimburse the Regional Board.

5. The submittal of technical reports evaluating interim cleanup measures will include a projection of the cost, effectiveness, benefits, and impact on public health, welfare, and environment of each alternative measure. The remedial action plan shall consider the guidance provided by Subpart F of the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR Part 300); Section 25356.1 (c) of the California Health and Safety Code; CERCLA guidance documents with reference to Remedial Investigation, Feasibility Studies, and Removal Actions; and the State Water Resource Control Board's Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California."

6. If the discharger is delayed, interrupted or prevented from meeting one or more of the completion dates specified in this Order, the discharger shall promptly notify the Executive Officer. In the event of such delays, the Board may consider modification of the task completion dates established in this Order.

7. All hydrogeological plans, specifications, reports and documents shall be signed by or stamped with the seal of a registered geologist, engineering geologist or professional engineer.

8. All samples shall be analyzed by State certified laboratories or laboratories accepted by the Board using approved EPA methods for the type of analysis to be performed. All laboratories shall maintain quality assurance/quality control records for Board review.

9. The discharger shall maintain in good working order, and operate as efficiently as possible, any facility or control system installed by the dischargers to achieve compliance with the requirements of this Order.

10. Copies of technical reports submitted under Tasks 2, 3, and 4 shall be provided to Intersil and Sobrato. Both Intersil and Sobrato may submit comments on the reports to the Regional Board within one month after the receipt of the report. Copies of all correspondence, reports, and documents pertaining to compliance with the Prohibitions, Specifications, and Provisions of this Order shall also be provided to the following agencies:

a. Santa Clara Valley Water District (1 copy, Tom Iwamura)
b. Intersil, Inc. (1 copy, Deborah Hankins)
c. Sobrato Development Companies (1 copy, William Burns)

The discharger shall provide copies of cover letters, title page, table of contents and the executive summaries of above compliance reports - except for the annual progress reports, Proposal for Groundwater Remediation, and Proposal for Soil Remediation which shall be submitted in full to the following agencies.

a. Santa Clara County Health Department (Lee Esquibel)
b. City of Sunnyvale (Ben Gikis)
c. California EPA/DTSC Site Mitigation Branch (Barbara Cook)

The Executive Officer may require the discharger to provide copies to other parties, such as the U.S. Environmental Protection Agency, Region IX, and the local repository for public use.

11. The discharger shall permit the Board or its authorized representatives, in accordance with Section 13267 (c) of the California Water Code, access to copy any records required to be kept under the terms and conditions of this Order.

12. If any hazardous substance is discharged in or on any waters of the State, or discharged and deposited where it is, or probably will be discharged in or on any waters of the State, the discharger shall report such discharge to this Board, at (510) 286-1255 on weekdays during office hours from 8 AM to 5 PM, and to the Office of Emergency Services at (800) 852-7550 during non-office hours. A written report shall be filed with the Board within five (5) working days and shall contain information relative to: the nature of the waste or pollutant, quantity involved, duration of incident, cause of spill, estimated size of affected area, nature of effects, corrective measures that have been taken or planned, and a schedule of these activities, and persons, notified.

13. The Board will review this Order periodically and may revise the requirements when necessary.

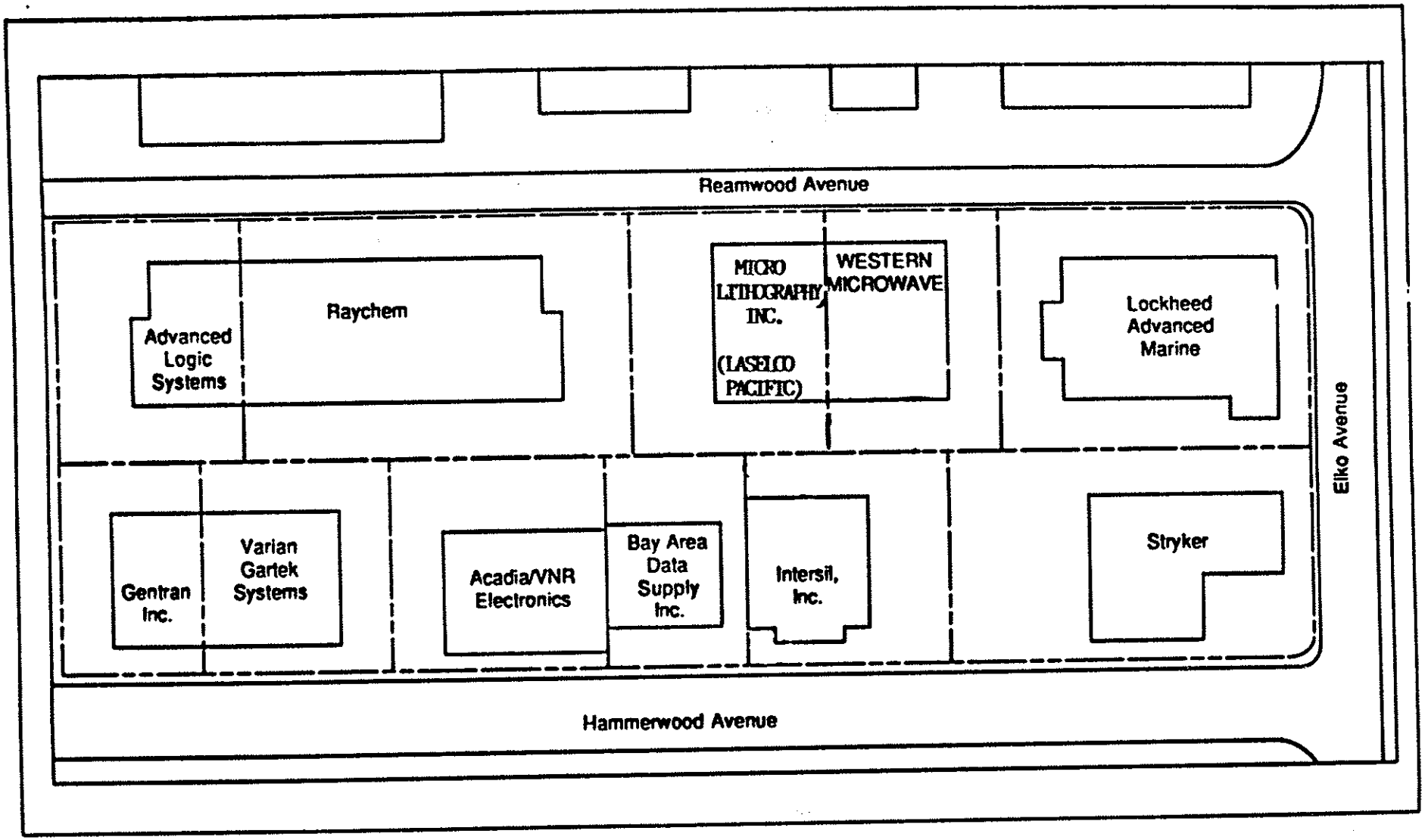
I, Steven R. Ritchie, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on May 19, 1993.

Steven R. Ritchie
Executive Officer

Attachments: Figure 1 Parcel Map with Adjacent Sites
Self-Monitoring Report

Figure 1

WESTERN MICROWAVE, INC. AND ADJACENT SITES



Notes

1- Base map: Pacific Aerial Survey air photo no. AV2485-08-07 dated 1 July 1984; redrawn from "Interim Remedial Action Plan" by Geomatrix, March 1987.

2- (33) indicates level of analyte in microgram per liter detected in groundwater.

3- —— 100 —— indicates horizontal extent of chemical plume based on linear interpolation.

N

0 100 Feet

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

GROUNDWATER SELF-MONITORING PROGRAM

FOR

WESTERN MICROWAVE, INC.

1271/1273 Reamwood Avenue Site

Sunnyvale, Santa Clara County

ORDER NO. 93-048

Adopted on May 19, 1993

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

WESTERN MICROWAVE, INC.
1271/1273 Reamwood Avenue Site

GROUNDWATER SELF-MONITORING PROGRAM

A. GENERAL

Reporting responsibilities of waste dischargers are specified in Sections 13225(a), 13267(b), 13283, 13383 and 13387(b) of the California Water Code and this Regional Board's Resolution No. 73-16.

The principal purposes of a monitoring program by a waste discharger, also referred to as self-monitoring program (SMP), are: (1) to document compliance with waste discharge requirements and prohibitions established by this Regional Board, (2) to facilitate self-policing by the waste discharger in the prevention and abatement of pollution arising from waste discharge, (3) to develop or assist in the development of effluent or other limitations, discharge prohibitions, national standards of performance, pretreatment and toxicity standards, and other standards, and (4) to prepare water and waste water quality inventories.

B. SAMPLING AND ANALYTICAL METHODS

Sample collection, storage, and analyses shall be performed according to the EPA Method 8000 series in "Test Methods for Evaluating Solid Wastes, Physical/Chemical methods," dated November 1986; or other methods approved and specified by the Executive Officer of this Regional Board.

C. REPORTS TO BE FILED WITH THE REGIONAL BOARD

1. Violation of Requirements

In the event the discharger is unable to comply with the conditions of the site cleanup requirements and prohibitions due to:

a. maintenance work, power failures, or breakdown of waste treatment equipment, or

b. accidents caused by human error or negligence, or

c. other causes, such as acts of nature, or

d. poor operation or inadequate system design,

the discharger shall notify the Regional Board office by telephone as soon as he or his agents have knowledge of the incident and confirm this notification in writing within five working days of the telephone notification. The written report shall include time, date, and person notified of the incident. The report shall include pertinent information explaining reasons for the noncompliance and shall indicate what steps were taken to prevent the problem from recurring.

2. The discharger shall file a written technical report to be received at least 30 days prior to advertising for bid (or 60 days prior to construction) on any construction project which would cause or aggravate the discharge of waste in violation of requirements; said report shall describe the nature, cost, and scheduling of all action necessary to preclude such discharge.

3. Self-Monitoring Reports

Written reports shall be filed quarterly due one month after the end of each calendar quarter until further notice is given by the Executive Officer.

The discharger shall notify Regional Board staff by telephone within fourteen days of receiving laboratory analytical results if (i) a chemical is detected which has not been detected previously, or (ii) if the concentration of any chemical in any well is at least one order of magnitude greater than detected the previous quarter.

The next quarterly report is due August 1, 1993. The reports shall be comprised of the following:

a. Letter of Transmittal:

A letter from the discharger transmitting the SMR should accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period and actions taken or planned for correcting any requirement violations. If the discharger has previously submitted a detailed time schedule for correcting requirement violations, a reference to this correspondence will be satisfactory. Monitoring reports and the letter transmitting reports shall be signed by a principal executive officer or a duly authorized representative of that person.

The letter shall contain a statement by the official, under

penalty of perjury, that to the best of the signer's knowledge the report is true and correct.

b. Results of Analyses and Observations

(1) Results from each required analysis and observation shall be submitted in the self-monitoring regular reports. Results shall also be submitted for any additional analyses performed by the dischargers at the specific request of the Board. Quarterly water level data shall also be submitted in the report.

(2) The SMR shall include the groundwater extraction rates from each extraction well, water level data from the extraction wells, the results of any aquifer tests conducted.

(3) The SMR shall include a discussion of unexpected operational changes which could affect performance of the extraction system, such as flow fluctuations, maintenance shutdown, etc.

(4) The SMR shall also identify the analytical procedures used for analyses either directly in the report or by reference to a standard plan accepted by the Executive Officer. Any special methods shall be identified and should have prior approval of the Board's Executive Officer.

(5) The discharger shall describe in the SMR the reasons for significant increases in a pollutant concentration at a well. The description shall include:

(a) the source of the increase,

(b) how the discharger determined or will investigate the source of the increase, and

(c) what source removal measures have been completed or will be proposed.

(6) Original lab results shall be retained and shall be made available for inspection for six years after origination or until after all continuing or impending legal or administrative actions are resolved.

(7) The SMR shall include a summary of work completed since submittal of the previous report, design specifications if applicable, and work projected to be completed by the time of the next report.

(8) The SMR shall include tabulated results of self-monitoring water quality sampling analyses for all wells using analytical methods specified in item B of the SMP. Each report shall include updated isoconcentration maps of VOCs in groundwater.

(9) The SMR shall include updated water table and piezometric surface maps, based on the most recent water level measurements for all affected water bearing zones for all onsite and offsite wells. Interpretations of the data shall be discussed.

(10) A map or maps shall accompany the SMR, showing all sampling locations and plume contours for the predominant chemical(s), or other indicator chemicals upon request by the Executive Officer.

(11) The annual report may be combined with the fourth quarter regular report and shall include cumulative data for current year. The annual report for December shall also include minimum, maximum, median, and average water quality data for the year, and a summary of water level data. The report shall contain both tabular and graphical summaries of historical monitoring data.

4. SMP Revisions

Additional long term or temporary changes in the sample collection frequency and routine chemical analysis may become warranted as monitoring needs change. These changes shall be based on the following criteria and shall be proposed in a SMR. The changes shall be implemented no earlier than 45 days after the SMR is submitted for review unless approved in writing.

Criteria for SMP revision:

(1) Discontinued analysis for a routine chemical parameter for a specific well after a two-year period of below detection limit values for that parameter.

(2) Changes in sampling frequency for a specific well after a two-year period of below detection limit values for all chemical parameters from that well.

(3) Temporary increases in sampling frequency or changes in requested chemical parameters for a well or group of wells because of a change in data needs (e.g., evaluating groundwater extraction effectiveness or other remediation strategies).

(4) Add routine analysis for a chemical parameter if the parameter appears as an additional chromatographic peak in three consecutive samples from a particular well.

(5) Alter sampling frequency based on evaluation of collective data base.

D. DESCRIPTION OF SAMPLING STATIONS

All existing and future shallow and intermediate aquifer monitoring and extraction wells shall be monitored as appropriate. See Table 1 and Figure 2 for monitoring and extraction wells installed at the time of the adoption of this SMP.

E. SCHEDULE OF SAMPLING AND ANALYSES

1. All wells at the WMI site shall be sampled according to the schedule in Table 1 using EPA methods 8010 and 8020. EPA method 8240 shall be used in lieu of EPA methods 8010 and 8020 for all the wells during the fourth quarter of each year. New monitoring wells shall be sampled quarterly for at least one year, with specific monitoring frequency given in an updated Table 1. Sampling and monitoring shall be coordinated with other parties performing treatment and investigations in the area including Intersil. WMI is ultimately responsible for monitoring its wells, although results may be obtained from other parties performing investigations in the area.

2. In addition, if a previously undetected compound or peak is detected in a sample from a well, a second sample shall be taken within a week after the results from the first sample are available. All chromatographic peaks detected in two consecutive samples shall be identified and quantified in the self-monitoring report.

3. Groundwater elevations shall be obtained on a quarterly basis from all

wells at the site and submitted in the self-monitoring report with the sampling results.

4. Well depths shall be determined on an annual basis and compared to the depth of the well as constructed. If greater than ninety percent of screen is covered, the discharger shall clear the screen by the next sampling.

I, Steven R. Ritchie, Executive Officer, hereby certify that the foregoing self-monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in Order to obtain data and document compliance with site cleanup requirements established in Regional Board Order No. 93-048.

2. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger, and revisions will be ordered by the Executive Officer or Regional Board.

3. Was adopted by the Board on May 19, 1993.

5/19/93
Date

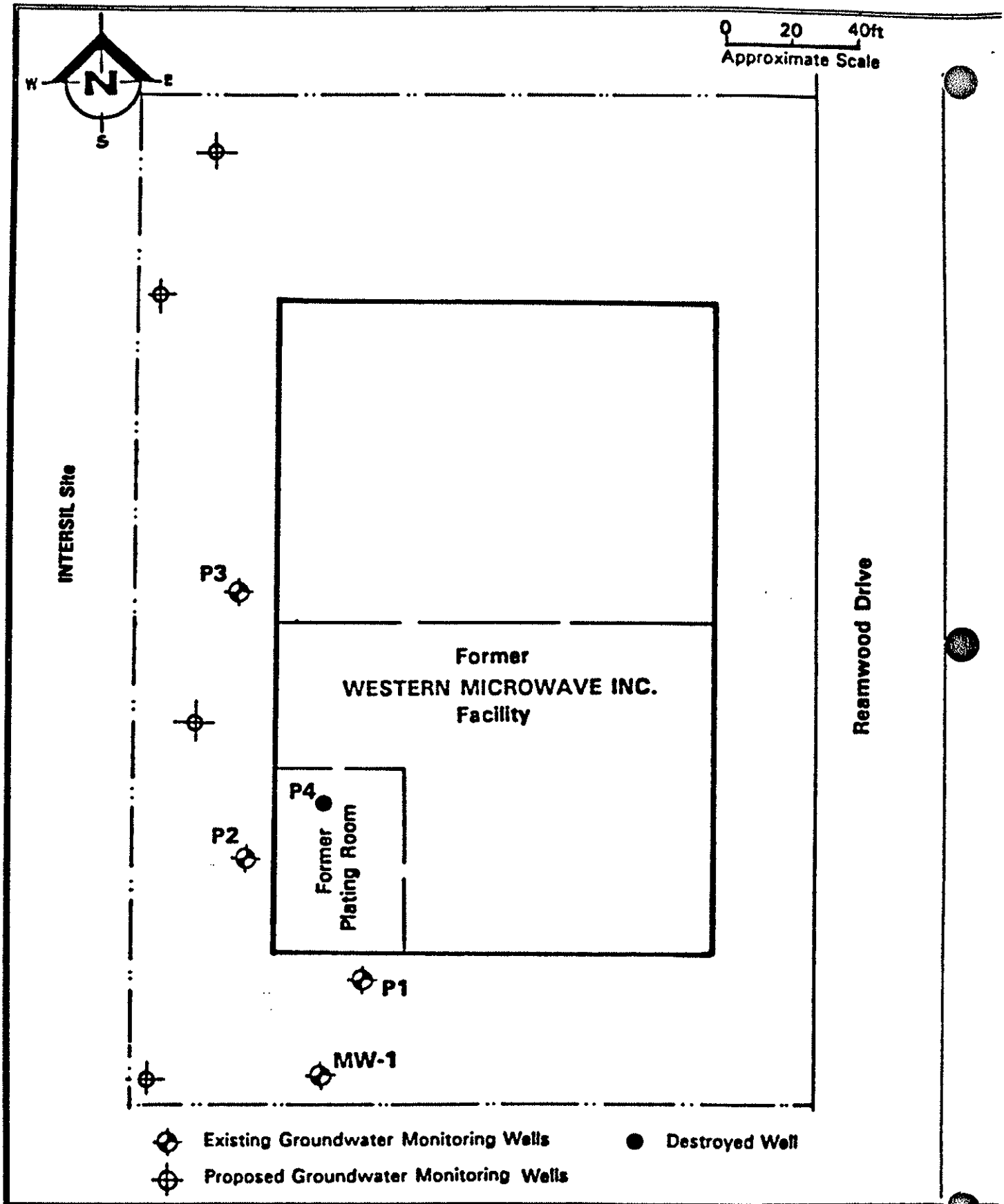
Steven R. Ritchie
Executive Officer

Attachments: Table 1 - Monitoring Schedule
Figure 2 - Wells Location Map

TABLE 1

MONITORING SCHEDULE FOR 1271/1273 REAMWOOD AVENUE FACILITY

SHALLOW ZONE		
Quarterly	Semi-Annually	Annually
P-1		
P-2		
P-3		
MW-1		
INTERMEDIATE ZONE		
Quarterly	Semi-Annually	Annually



E_2C, Inc. environmental/engineering consultants 1220 Crossman Avenue, Suite 200 Sunnyvale, CA 94089	SITE DIAGRAM/PROPOSED WELL LOCATIONS Western Microwave, Inc. 1271-1273 Reamwood Drive Sunnyvale, California	JOB NO. 4550100	FIGURE 2
		DRAWN BY J. Vasilescu	
		APP'D K. Price	Sept. 1992